C. Remarks

In the office action, claims 1-4, 6, and 15-18 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application US2002/0196854 ("Kim") and claim 5 was objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 7-14 and 19-20 were allowed. Applicant respectfully traverses the rejections as follows.

§ 102(e) Rejections

Claims 1-4 and 6

Applicant has amended claim 1 to recite method for making a mode decision in video coding that includes:

> collecting a first portion of video data;
>
> labeling the first portion of video data with an optimal mode;
>
> identifying at least one feature of the first portion of video data corresponding to the optimal mode;
>
> constructing a probabilistic model based on the at least one identified feature; and
>
> making a mode decision for a second portion of the video data based on an application of the probabilistic model to the second portion of the video.

Applicant has also amended dependent claims 4 and 5 in consequence of the amendment to their base claim, claim 1. Because amended claim 5 retains the subject matter of original claim 5 determined to be allowable (*e.g.*, "calculating a likelihood ratio..." and "selecting a hypothesis..."), Applicant submits that amended claim 5 is also allowable. Support for these amendments is found throughout the specification, figures, and claims as filed.

A claim rejection based on anticipation under § 102 requires that a single prior art reference disclose each and every element of the claimed invention. *See* MPEP § 2131 (stating that a claim is anticipated only if each and every element as set forth in the claim is disclosed in a single prior art reference). Applicant submits that Kim fails to anticipate claim 1 because it does not disclose each and every element recited therein.

Kim discloses a video encoding method and apparatus for reducing computational requirements for motion processing by analyzing macro-blocks of down-sampled video frames. *See* Abstract. The apparatus disclosed by Kim includes a scene analyzer (2000) for determining a search range for high-level motion estimation in the down-sample domain, determining whether an inter- or intra-mode should be used, classifying the motion of each macro-block to determine if the down-sample motion vector for the macro-block should be the zero-vector, and determining whether integer-pixel and half-pixel resolution motion estimation are performed by a low level motion estimator. *See* paragraph [0029]. Applicant submits that none of these functions performed by the scene analyzer (2000) include the step of "constructing a probabilistic model based on the at least one identified feature" as recited in amended claim 1.

In particular, contrary to the Examiner's contention at page 3 of the office action with respect to original claim 4, Applicant submits that paragraphs [0051]-[0053] fail to disclose construction of a probabilistic model. Rather, Kim discloses that encoder parameters (mean and modified variance) computed by the scene analyzer (2000) for current and previous macro-blocks are compared to corresponding thresholds to determine an adaptive search range. *See* paragraphs [0051]-[0052]. Kim further discloses that a motion classification logic variable is assigned a value based upon the

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comparison of the encoder parameters to their respective thresholds. *See* paragraph [0053]. The comparisons disclosed by Kim employ rule-based heuristics and in no way rely upon, or require the construction of, a probabilistic model. In fact, Kim nowhere discloses the use of probabilities or a probabilistic model for any function performed by the scene analyzer (2000).

For at least this reason, Applicant submits that claim 1 is not anticipated by Kim. Applicant further submits that claims 2-6 depending from claim 1 are not anticipated or rendered obvious in view of Kim by virtue of their dependence from claim 1 and by their own merits.

Claims 15-18

Applicant has amended independent claims 15, 16, and 18 to recite features similar to those described above in connection with amended claim 1. Accordingly, for reasons analogous to those set forth above, Applicant submits that claims 15, 16, and 18 are not anticipated by Kim. Applicant further submits that claim 17depending from claim 16 is not anticipated or rendered obvious in view of Kim by virtue of its dependence from claim 16 and by its own merits.

D. Conclusion

Applicant respectfully requests a Notice of Allowance for the pending claims in the present application. If the Examiner is of the opinion that the present application is in condition for disposition other than allowance, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below in order that the Examiner's concerns may be expeditiously addressed.

Respectfully submitted,
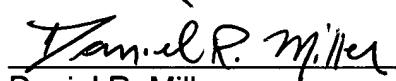
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